

[54] **LASER HEALING METHOD AND APPARATUS**

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[58] Field of Search ..... 128/397, 303.1; 219/121 L, 121 LA, 121 LB, 121 LS

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[57] **ABSTRACT**

The method and apparatus of the invention use a beam of laser emitted optical energy to effect wound closure and reconstruction of biological tissue. In response to input as to tissue type and thickness, a computer determines the output power, exposure time and spot diameter of the emitted beam to control the application of optical energy to produce thermal heating of biological tissue to a degree suitable for denaturing the tissue proteins such that the collagenous elements of the tissue form a "biological glue" to seal immediately and/or to reconstruct the tissue being heated. In a given embodiment, the computer directly controls output power of the laser by regulating the laser's input current, and limits exposure time by deactivating a shutter mechanism when the determined time is reached. Beam diameter is manually set in response to a displayed value for a sliding scale that controls the working distance between the end of a fiber optic beam guide and the tissue site.

20 Claims, 3 Drawing Sheets

